

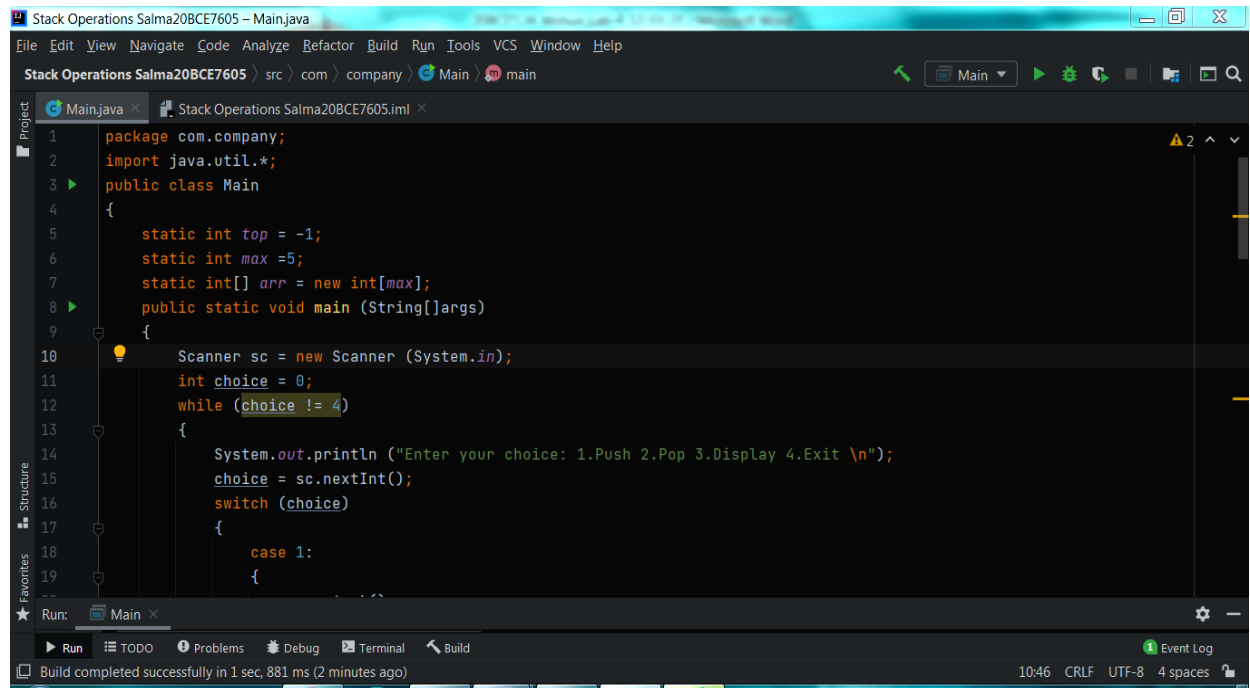
Salma

Date:13/03/21

20BCE7605

LAB 3

Code:



The screenshot shows an IDE window titled "Stack Operations Salma20BCE7605 - Main.java". The code is as follows:

```
1 package com.company;
2 import java.util.*;
3 public class Main
4 {
5     static int top = -1;
6     static int max = 5;
7     static int[] arr = new int[max];
8     public static void main (String[]args)
9     {
10         Scanner sc = new Scanner (System.in);
11         int choice = 0;
12         while (choice != 4)
13         {
14             System.out.println ("Enter your choice: 1.Push 2.Pop 3.Display 4.Exit \n");
15             choice = sc.nextInt();
16             switch (choice)
17             {
18                 case 1:
19                 {
```

The IDE interface includes a menu bar (File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help), a toolbar with icons for running, debugging, and other actions, and a sidebar with Project, Structure, and Favorites views. The bottom status bar indicates "Build completed successfully in 1 sec, 881 ms (2 minutes ago)" and shows the time "10:46" along with encoding "CRLF" and "UTF-8" with "4 spaces" indentation.

```
Stack Operations Salma20BCE7605 – Main.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Stack Operations Salma20BCE7605 src com company Main main
Main.java Stack Operations Salma20BCE7605.iml
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case 1:
{
    pop_stack();
    break;
}
case 2:
{
    push_stack();
    break;
}
case 3:
{
    display_stack();
    break;
}
case 4:
{
    System.out.println("Exiting the code...");
    System.exit(status: 0);
}
Run: Main
Run TODO Problems Debug Terminal Build
Build completed successfully in 1 sec, 881 ms (3 minutes ago) 10:46 CRLF UTF-8 4 spaces
```

```
Stack Operations Salma20BCE7605 – Main.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Stack Operations Salma20BCE7605 src com company Main main
Main.java Stack Operations Salma20BCE7605.iml
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54
System.exit(status: 0);
break;
}
default:
{
    System.out.println("Invalid choice. Please try again.");
}
}
}
static boolean pop_stack(){
    if(top == -1){
        System.out.println("Stack Underflow!");
        return false;
    }
    else
    {
        top--;
        System.out.println("Item popped.");
    }
}
Run: Main
Run TODO Problems Debug Terminal Build
Build completed successfully in 1 sec, 881 ms (3 minutes ago) 10:46 CRLF UTF-8 4 spaces
```

This screenshot shows the 'push_stack' method in a Java file named 'Main.java'. The code is as follows:

```
54         System.out.println("Item popped.");
55         return true;
56     }
57 }
58 static void push_stack(){
59     if(top== max -1) {
60         System.out.println("Stack Underflow!");
61     }
62     else {
63         Scanner sc = new Scanner(System.in);
64         System.out.println("Input a number to be pushed into the stack:");
65         int n = sc.nextInt();
66         top++;
67         arr[top] = n;
68         System.out.println("Item has been pushed successfully.");
69     }
70 }
71 static void display_stack(){
72     System.out.println("Printing stack elements...\n");
```

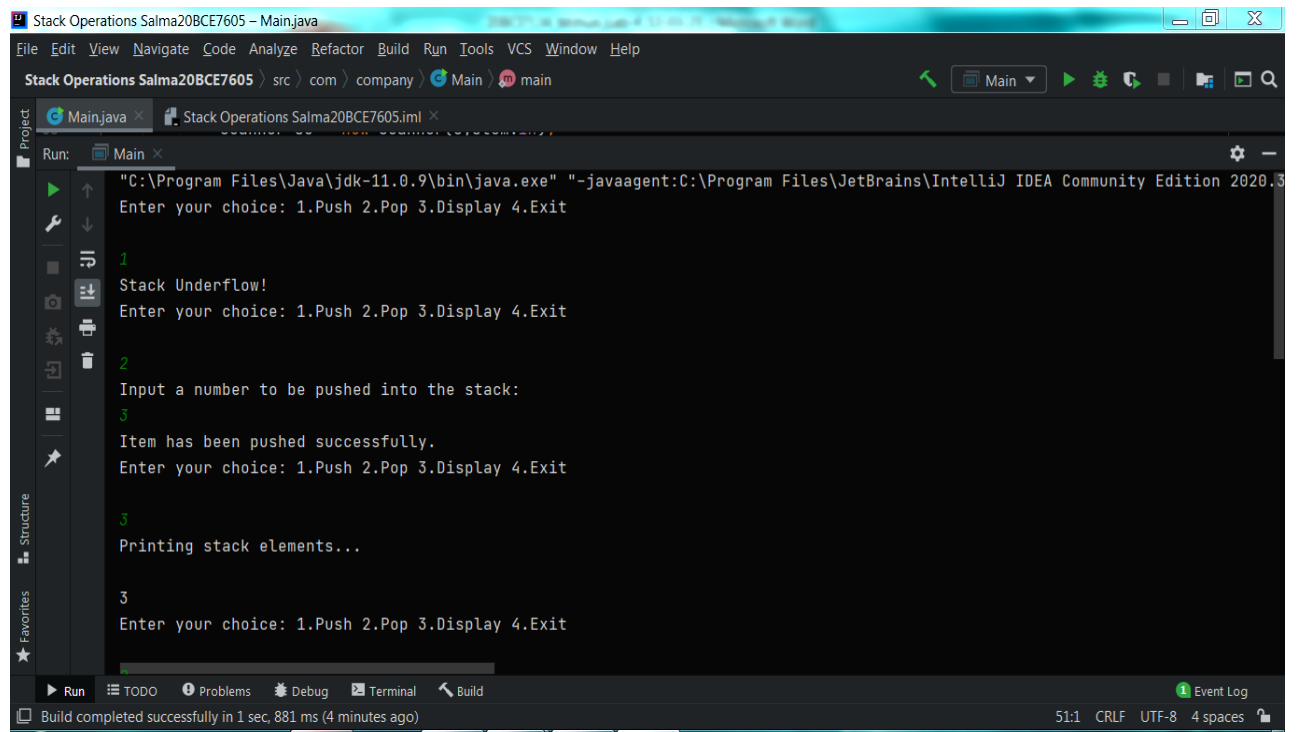
The IDE interface includes a menu bar, a toolbar with icons for running, debugging, and other actions, and a status bar at the bottom indicating the build was successful.

This screenshot shows the 'display_stack' method in the same 'Main.java' file. The code is as follows:

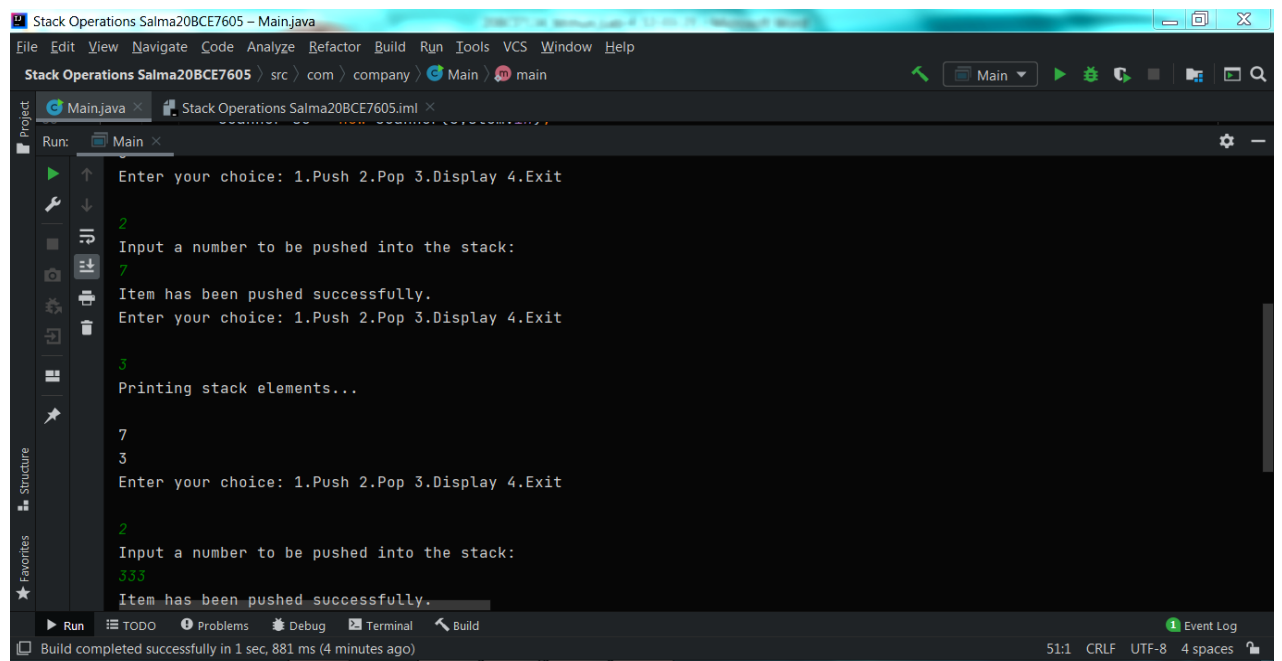
```
61     }
62     else {
63         Scanner sc = new Scanner(System.in);
64         System.out.println("Input a number to be pushed into the stack:");
65         int n = sc.nextInt();
66         top++;
67         arr[top] = n;
68         System.out.println("Item has been pushed successfully.");
69     }
70 }
71 static void display_stack(){
72     System.out.println("Printing stack elements...\n");
73     for(int i =top; i>=0; i--){
74         System.out.println(arr[i]);
75     }
76 }
77 }
```

The IDE interface is consistent with the previous screenshot, showing the same menu bar, toolbar, and status bar.

Output:



```
Stack Operations Salma20BCE7605 – Main.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Stack Operations Salma20BCE7605 src com company Main main
Project Main.java Stack Operations Salma20BCE7605.iml
Run: Main
"C:\Program Files\Java\jdk-11.0.9\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.3\lib\idea_rt.jar=5000:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020.3\bin" -Dfile.encoding=UTF-8
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit
1
Stack Underflow!
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit
2
Input a number to be pushed into the stack:
3
Item has been pushed successfully.
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit
3
Printing stack elements...
3
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit
Run TODO Problems Debug Terminal Build
Build completed successfully in 1 sec, 881 ms (4 minutes ago) 51:1 CRLF UTF-8 4 spaces
```



```
Stack Operations Salma20BCE7605 – Main.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Stack Operations Salma20BCE7605 src com company Main main
Project Main.java Stack Operations Salma20BCE7605.iml
Run: Main
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit
2
Input a number to be pushed into the stack:
7
Item has been pushed successfully.
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit
3
Printing stack elements...
7
3
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit
2
Input a number to be pushed into the stack:
333
Item has been pushed successfully.
Run TODO Problems Debug Terminal Build
Build completed successfully in 1 sec, 881 ms (4 minutes ago) 51:1 CRLF UTF-8 4 spaces
```

The screenshot shows an IDE window titled "Stack Operations Salma20BCE7605 - Main.java". The menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The breadcrumb path is "src \ com \ company \ Main \ main". The Run configuration is set to "Main". The console output is as follows:

```
2
Input a number to be pushed into the stack:
333
Item has been pushed successfully.
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit

3
Printing stack elements...

333
7
3
Enter your choice: 1.Push 2.Pop 3.Display 4.Exit

4
Exiting the code...

Process finished with exit code 0
```

The status bar at the bottom indicates "Build completed successfully in 1 sec, 881 ms (4 minutes ago)", "51:1 CRLF UTF-8 4 spaces", and an "Event Log" icon.